UF | ICBR Gene Expression & Genotyping

Cell Line Authentication - Frequently Asked Questions:

Q: What do I need to bring in?

A: Extracted Genomic DNA (concentration at least 10ng/ul, volume at least 10 uL), or a cell pellet (at least 5 x 10^5 cells) in 100ul 1X PBS on dry ice. We charge an extra $15 per sample to extract gDNA from the pellet.

Q: What types of cell lines does the core accept?

A: Human cell lines only. We provide a comparison report for cell lines in the ATCC database. If your cell line is not on the ATCC database then it will not return an appropriate match. If you expect that your cell-line exists in another database, such as DSMZ or CLIMA, please let us know and we will check for matches there as well. We provide the loci for all samples, so you can always use the loci to search for and analyze matches yourself.

Q: What if I am working with a custom cell line or my cell line is not found in a database?

A: You can still use our cell line authentication results to establish a genetic profile for your cell line, which can be used for future comparisons.

Q: How do we know if we have a match?

A: The ATCC STR Database sorts through records of loci, and automatically calculates a percent match. Loci match of 80% or greater generally indicates that your cells are a match to that reference line. If it is less than 80%, this could indicate contamination or misidentification. If you provide the ATCC reference number for your cell line, we will look up its loci and include them in the data report for direct comparison with the sample.

Q: How is the percent match calculated?

A: The ATCC Database automatically calculates matches, but it can be done manually using the following formula: (number of SHARED alleles between two cell lines) / (number of TOTAL alleles in test cell profile).

Q: What kit is used?

A: Promega GenePrint24, which allows co-amplification of the following loci: D3S1358, D1S1656, D2S441, D10S1248, D13S317, D16S539, D18S51, D2S1338, CSF1PO, TH01, vWA, D21S11, D7S820, D5S818, TPOX, D8S1179, D12S391, D19S433, D22S1045, and FGA plus Penta E, Penta D, DYS391 and Amelogenin.

Q: How much does cell line authentication cost?

A: UF customers: $60 per sample, plus $15 per sample if we do genomic DNA extraction.

Non-profit customers: $65 per sample, plus $30 per sample if we do genomic DNA extraction.

Commercial customers: $75 per sample, plus $45 per sample if we do genomic DNA extraction.

Q: What is provided in data delivery?

A: We deliver a PDF report which includes all database matches, including the loci for your sample. We can also provide raw files (in .fsa format) or GeneMapper data plots.

Q: When should cell line authentication be performed?

A: It is recommended to authenticate whenever a new line is established or acquired, before publishing, if the performance of cell line is inconsistent or produces unexpected results, before freezing, and every two months that the culture is actively growing. Authentication is especially important if your lab has more than one active cell line at a time.

Q: What are the steps involved in cell line authentication?

A: